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Weight management intervention in overweight and obese Mongolian adults with newly diagnosed type-2 diabetes

Bolormaa Vandanmagsar¹, Sainbileg Sonomtseren², Yanjmaa Sankhuu³ and Jaycob D Warfel¹¹Pennington Biomedical Research Center, USA²National University of Medical Sciences, Mongolia³State Central Clinical Hospital, Mongolia

We evaluated the effectiveness of a weight loss intervention in Mongolian adults with newly diagnosed type-2 diabetes mellitus and with BMI-25.0 kg/m², the first study of its kind to be conducted in Mongolia. 80 participants (33 men and 47 women) aged 32-56 years old received education sessions to improve nutritional habits and increase physical activity. Participants were counseled in-person on two occasions with regular follow-up by phone to eat less (reduce calorie intake by 30-40% and consume fewer fatty foods), shift food intake to earlier in a day and increase physical activity such as walking, jogging, running and biking. After 6 months, the average weight loss was 4.3±4.7 kg, representing a 4.9±5.4% reduction in body weight- $p<0.0001$. Mean HbA1c decreased from 8.5±2.7% to 6.0±1.8%, $p<0.0001$ and the percent of individuals with HbA1c in the diabetic range dropped from 76.3% to 27.5%. These changes were accompanied by marked improvements in cardiovascular risk factors, including total cholesterol (3.92±1.02 to 3.13±0.80 mmol/l; $p<0.0001$) and triglycerides (2.11±0.82 to 1.54±0.51 mmol/l; $p<0.0001$) and modest reductions in systolic and diastolic blood pressure ($p<0.05$). The remarkable improvement in glycemic control and lipid profile in participants suggests that a lifestyle modification intervention targeting weight loss may be highly effective for early diabetes treatment and prevention in Mongolians.

vandanb@pbrc.edu